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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/057,028	01/23/2002	Lin Zhu	O01-096A	3586

26683 7590 11/23/2004

THE GATES CORPORATION  
IP LAW DEPT. 10-A3  
1551 WEWATTA STREET  
DENVER, CO 80202

EXAMINER
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THOMPSON, KENNETH L

ART UNIT	PAPER NUMBER
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3672

DATE MAILED: 11/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/057,028

Applicant(s)

ZHU ET AL.

Examiner

Kenn Thompson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 2 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,3-7 and 9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-7 and 9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2Sept04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4-7 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Hamada, U.S. 5,326,324.

Regarding claims 1 and 7, Hamada discloses in figures 1-5 a shaft. Hamada discloses an outer member (26) having an inner surface describing a bore; an inertial member (28) having a predetermined mass disposed within the bore and having an outer surface, an elastomeric member (32) compressed between and engaged with the outer member inner surface and the inertial member outer surface (at 40) for damping a shaft vibration; and the outer surface further comprising an arcuate surface (cylindrical outer surface is considered to be arcuate) having shape selected to accommodate a damping requirement by determining an elastomer stiffness and which arcuate surface mechanically retains the inertial member within the elastomeric member.

As to claim 4, Hamada discloses the inertial member damps a bending vibration (col. 2, lines 41-45).

As to claim 5, Hamada discloses the inertial member further comprises a groove (radial lip of 40 at 36) extending parallel to a shaft centerline.

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As to claim 6, Hamada discloses a plurality of inertial members (30,40) engaged with a plurality elastomeric members (32,36,46).

As to claim 9, Hamada discloses the outer surface further comprises a groove (radial lip of 40 at 36) extending parallel to an inertial member centerline.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hamada, U.S. 5,326,324 in view of Haushalter, U.S. 3,077,090.

As to claim 3, Hamada discloses the resilient member (32) is compressed (col. 4, lines 43-55) between the inner surface and the outer surface. Hamada does not disclose the resilient member is compressed in a range of 5 to 50 percent of an uncompressed thickness. Haushalter teaches in figure 3 and 4 use of a resilient member (12) being compressed in a range of 5 to 50 percent of an uncompressed thickness (col. 2, lines 61-65) to frictionally engage the surfaces. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the resilient member disclosed by Hamada to be compressed in the range of 5 to 50 percent as taught by Haushalter to frictionally engage the surfaces to thereby better keep its place.

***Response to Arguments***

Applicant's arguments filed 2 September 2004 have been fully considered but they are not persuasive.

Applicant argues the prior art elastic support members 32, 32 are not in compression between an outer member (shaft 12) inner surface and an inertial member (damper mass 30) outer surface as claimed.

The elastic support members are in compression between the outer shaft and at least a portion of the inertia member 28 including metal members 40. The claimed inertia member is not structurally limited to exclude the additional element.

Applicant argues the prior art metal members 40 suggested by the Examiner are not inertial members for the purpose of damping a shaft vibration, instead, they are simply means to connect the damper 28 to the shaft.

The claimed inertia member is not structurally limited to preclude inclusion of additional elements in the comparison. The metal members connect the damper 28 to the shaft and is required for the damper to function.

Applicant argues prior art radial lip, 40 at 36 does not extend parallel to a shaft centerline as claimed. It appears the circular lip at 40 is disposed in a plane normal to a shaft centerline.

The radial lip of 40 at 36 forms a radial groove at least parallel to a shaft centerline transverse to the longitudinal or rotational axis. The shaft centerline is interpreted to be located at the center or midpoint of the shaft, not necessarily the rotational axis.

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***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Alther, U.S. 4,139,994 discloses a similar shaft.

Kuwayama et al., U.S. 6,517,062 discloses a similar arcuate surface.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

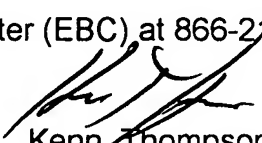
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenn Thompson whose telephone number is 703 306-5760. The examiner can normally be reached on 7:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J Bagnell can be reached on 703 308-2151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

17 November 2004



Kenn Thompson  
Primary Patent Examiner  
Art Unit 3672